

Having thus described the invention, it is now claimed:

1. A vibration isolator assembly comprising:  
a housing;  
an isolator connected to the housing for limiting the transmission of vibrations thereto;  
a shaft assembly including first and second mating components, the first component connected to the isolator and forming a cavity of a first dimension for receiving the second component having a second dimension slightly greater than the first dimension for altering stress characteristics of the isolator assembly; and  
a thin layer of material interposed between the first and second components of the shaft assembly.
2. The invention of claim 1 wherein the thin layer of material is an elastomer provided on one of the first and second components of the shaft assembly.
3. The invention of claim 2 wherein the thin layer of elastomer is provided on the first component of the shaft assembly.
4. The invention in claim 3 wherein the thin layer of elastomer is provided on an inner surface of the first component.
5. The invention of claim 4 wherein the second component is contoured for receipt in the cavity of the first component along the surfaces of first and second portions of the first component.
6. The invention of claim 4 wherein the second component has an "I" contour which limits relative movement of the first and second components of the shaft assembly.
7. The invention of claim 1 wherein the thin layer of material is provided on the first component of the shaft assembly.

8. The invention of claim 1 wherein the isolator is an elastomer.
9. The invention of claim 1 wherein the housing is metal.
10. The invention of claim 1 wherein the housing is a non-metallic material.
11. The invention of claim 1 wherein the isolator is an elastomer that is molded to the housing and the first component of the shaft assembly.
12. The invention of claim 1 wherein the first component is contoured for slidable receipt of the second component.
13. The invention of claim 1 wherein the second dimension of the second component is preselected to relieve tensile stress in the isolator.
14. The invention of claim 1 wherein the second dimension of the second component is preselected to impart compressive stress to the isolator.
15. A vibration isolator assembly comprising:  
a housing;  
an elastomer isolator connected to the housing for limiting the transmission of vibrations thereto; and  
a shaft assembly that is adapted for exposure to vibration forces, the shaft assembly including first and second mating components, the first component connected to the isolator and forming a cavity of a first dimension for receiving the second component having a second dimension slightly greater than the first dimension for altering stress characteristics of the isolator assembly, the cavity including a thin layer of elastomer interposed between the first and second components of the shaft assembly.
16. The invention of claim 15 wherein the first component is contoured for slidable receipt of the second component of the shaft assembly.

17. The invention of claim 16 wherein the first component of the shaft assembly is a split member having first and second surfaces disposed in facing relation.

18. The invention of claim 17 wherein the second component is contoured for receipt in the cavity of the first component along the split, first and second surfaces of the first component.

19. The invention of claim 18 wherein the first and second components of the shaft assembly include keyed contours for limiting relative movement of the first and second components of the shaft assembly in directions other than a direction of the split between the first and second components.

20. A method of altering spring rate characteristics in a vibration isolator assembly having a housing, shaft, and isolator interconnecting the housing and shaft to limit transfer of vibration therebetween, the method comprising the steps of:

forming a cavity in the shaft;

forming a shaft assembly from a split, first component and inserting a second component of the shaft assembly between the split portions of the first component to alter the spring rate characteristics of the vibration isolator assembly; and

coating a surface of each split component with a material to form a close dimensional tolerance of the split components.